REMARKS

Claims 1-19 were originally pending, and subject to restriction. Claims 9-16, 18, and 19 have been withdrawn without prejudice, and claims 1-8 and 17 remained pending. Claim 1 has been rejected, and claims 2-8 and 17 have been allowed. No claims have been amended, cancelled, or added to the application. Accordingly, claims 1-8 and 17 are currently pending in the application. Favorable reconsideration and allowance of this application is respectfully requested in light of the following remarks.

I.   Claim Rejections - 35 USC § 102

Claim 1 is rejected under 35 USC 102(b) as being anticipated by the article cited by Applicant entitled "Reducing I/O Demand in Video-On-Demand Storage Servers," referred to herein as the "Golubchik" document.

Golubchik discloses an approach to reducing the I/O demand on the storage server through sharing (i.e., increasing the number of user requests which can be served simultaneously – See Page 26, left column, 2nd full paragraph). Golubchik concentrates on adaptive piggybacking, which is defined as "a policy for altering display rates of requests in progress for the purpose of merging their respective I/O streams into a single stream" (Page 26, left column, below the 3 examples). Golubchik elaborates on the technicalities involved in altering display rates in Section 2 (Page 26, right column, 1st sentence of last full paragraph).

In Section 2, entitled "Altering Display Rates," Golubchik discloses the procedure used for merging two streams. Specifically, it is assumed that display units of each data stream being fed are standard. Accordingly, the effective display rate can be decreased by adding additional frames to the video. For instance, if 1 additional frame is added for every 10 of the original frames, the effective display rate will be reduced. Conversely, by removing frames, the effective display rate can be increased. By reducing the display rate of a stream, an earlier-transmitted stream can merge with a later-transmitted stream. Conversely by increasing the display rate of a stream, a later-transmitted stream can merge with an earlier-transmitted stream. Unfortunately, this method is only effective if the end user does not perceive a distortion in the altered stream. Golubchik recognizes this drawback by noting that the effective display rate can only be adjusted +/- 5% without being perceptible to the viewer. As a result, streams are limited in their ability to "catch up to" other streams. In particular, if a stream has to be time-distorted at a rate

7

greater than 5% in order to merge with another stream, the distortion will be noticeable to the viewer.

The Office Action cites Golubchik at Page 28 against the pending claim 1. However, Golubchik at Page 28 discloses what is called "Adaptive Piggybacking" (See Section 4 Title) that merely recites systems that incorporate the above-described method of altering display rates. For instance, Page 28 (right column, lines 5-11) recognize that the streams can be merged by altering the display rates as described in Sections 1 and 2 (i.e., by adding and removing frames).

Clearly, Golubchik discloses a system for merging two streams by removing and adding frames to a frame, thereby adjusting the frames effective display rate.

The specification of the present application specifically distinguishes the present invention from the conventional Piggybacking techniques of the type disclosed by Golubchik. For instance, the specification describes piggybacking as transmitting an accelerated data stream at a rate higher than the initial data stream. This may be done by adjusting the display rate in the case of video files so that the video plays imperceptibly faster (Page 3, lines 24-27; Fig. 2). Applicant accordingly refers to the Piggybacking technique as requiring "time-distorted" data (Page 4, lines 27-28). The specification further recognizes that the time distortions associated with the accelerated streams in a piggybacking system may be unacceptable (Page 4, lines 1-2).

Accordingly, the present invention provides a system that enables two streams to merge while, at the same time, ensuring that neither stream is time-distorted. Specifically, claim 1 recites the step of (c) receiving at the client a composite of the first transmission and data of the target transmission, neither of which is time-distorted, wherein a data rate of the composite is a non-integer multiple of the playback rate (underline added for emphasis). Rather, in the present invention, data streams are played at their normal rate, and clients record, or buffer, data from adjacent streams. Accordingly, two data streams can merge without time-distorting the data from either stream (See, for example, Page 12, lines 8-16; Page 13; Page 15, lines 13-19; Page 16, lines 1-4).

Golubchik clearly fails to teach or suggest a method of transmitting program data such that neither data stream is time distorted. Moreover, Golubchik teaches against this limitation, as Golubchik's method of merging two streams involves either adding additional frames to a stream (thus time-distorting the stream to decrease the playback speed), or by removing frames from a stream (thus time-distorting the stream to increase

8

the playback speed). As noted above, significant limitations are imposed when time-distorting streams because, as noted in Golubchik, if the streams are distorted by more than 5%, the distortions are likely to be perceived by the viewer. The present invention avoids these constraints by merging data streams without time-distorting the data from either stream.

Accordingly, because Golubchik fails to teach or suggest each limitation of claim 1, and because claim 1 presents advantages not attainable in Golubchik, Applicant asserts that claim 1 is allowable as originally drafted. Withdrawal of the rejection of claim 1 under 35 USC 102(b) is therefore respectfully requested.

II. Allowable Subject Matter

Applicant notes with appreciation that claims 2-8 and 17 have been allowed, as noted on Page 4 of the Office Action.

III. Conclusion

Applicant therefore respectfully asserts that all rejections and objections cited by the Examiner have been overcome. Accordingly, the application is in condition for allowance, and a Notice of Allowance is earnestly solicited. The Examiner is invited to contact the undersigned at the telephone number appearing below if such would advance the prosecution of this application.

The Commissioner is hereby authorized to deduct the $120 fee for a one-month extension of time, along with any additional fees arising as a result of this Amendment or any other communication, from Deposit Account No. 17-0055.

Respectfully submitted,

John Zahorjan, et al.

By: _____
Adam J. Forman
Attorney for Applicant
Quarles & Brady
411 E. Wisconsin Avenue, Suite 2040
Milwaukee WI 53202-4497
(414) 277-5405
Reg. No. 46,707

MKE\5669596

9